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APPLICATIONS SATELLITES
LEGAL ASPECTS

PART I - SPACE LAW AND APPLICATIONS SATELLITES

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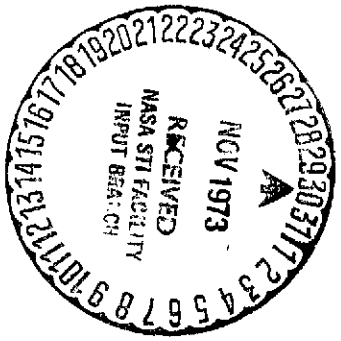

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16. Abstract

Since 1958 the U.N. has studied the question of the utilization of extra-atmospheric space for peaceful purposes. The work already accomplished by the U.N. in matters of space law is considerable, including the U. S.-Soviet agreement on cooperation in the field of exploration and utilization of cosmic space, signed in Moscow on May 24, 1972. Within the framework of multilateral agreements the work of ESRO and ELDO is discussed. It is pointed out that applications satellites are intended to be used to realize strictly terrestrial ends, to increase human knowledge and sometimes, as a consequence, human power in the terrestrial domain.

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APPLICATIONS SATELLITES
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PART I - SPACE LAW AND APPLICATIONS SATELLITES

C. A. Colliard[1]

When scientific and technical progress opens up new channels for human activity, it is often necessary to work out a special legal regulation concerning this new form of activity. /1*

Thus, in order to keep within the bounds of a few obvious examples, we can mention the discoveries and practical applications in the matter of telegraphy, electricity or atomic energy which gave rise to particular legal rules which were either specially created or produced from the transformation of previous rules.

The acceptance of a new system or the adaptation of the old system is going on rather quickly with respect to scientific discovery and the use of its applications. However, insofar as concerns what can be called "the conquest of space", the creation of a new law has gone on at utmost speed.

The first orbit of a satellite dates, as a matter of fact, from 4 October with Sputnik-1. It was in the year 1961 that the Soviet cosmonauts Y. Gagarin (12 April) and G. Titov (6 and 7 August) respectively described one and 17 orbits. For their part, the American astronauts A. Shepard (5 May) and V. Grissom (21 July) carried out ballistic flights. A meaningful comparison can be made between this scientific chronology and that of legal texts.

The United Nations, during the thirteenth session of the General Assembly, adopted Resolution 1348 on 13 December 1958 concerning "The Question of

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* Numbers in the margin indicate pagination in the foreign text.

Use of Outer Space for Peaceful Means". This resolution set up a Special Committee for Peaceful Use of Outer Space. It enunciated a number of basic principles, acknowledging that outer space involves all mankind and that the common goal is to see it used for peaceful means exclusively. It recalls that the United Nations is based on the principle of sovereign equality of member nations and asserts that international cooperation should be revealed in space matters and be done in such a way as to develop mutual understanding and strengthen friendly relationships between peoples.

The same resolution specifies various goals for the Special Committee and invites it to present a report at the fourteenth session. One of the points to be covered by this report concerned "the nature of legal problems which could arise owing to carrying out programs for the exploration of outer space".

This identical phraseology may be found in Resolution 1472 of 12 December 1959 which sets up the Committee for Peaceful Uses of Outer Space which replaced the Special Committee. /2

Resolution 1721 was adopted on 20 December 1961, the year having been characterized by the first manned spaceflights. This basic text recommends that the States be guided in the exploration and use of space by the following principles: application of international law and the United Nations Charter to space and celestial bodies, freedom of exploration and use by all States in conformity with international law and the principle of not being subject to national appropriation.

Resolution 1721 is quite important for it outlines various management paths. It requires, in its article B, that States orbiting satellites supply data for the purpose of recording launches and asks that the Secretary General maintain a public record file of this data. Furthermore, it emphasizes the possible applications of developments in space, for example, in the field of meteorological research and analysis (article C) and in the field of satellite communications (article D).

The subsequent resolutions carry this program forward with Resolution 1802 which is especially involved with legal problems whose study it commends

to the Specialized Committee (and its appropriate sub-committee) with the request to take into account those manifold projects presented by the various States.

This program gradually became a reality although with some degree of delay[2]. Indeed, it was only towards the end of the year 1966 that the text of the treaty on the principles governing the activities of States in the matter of exploring and use of outer space, including the Moon and other celestial bodies, was accepted. It was appended to Resolution 2222 of 18 December. 1967 marks the acceptance, according to similar terms and conditions, of the agreement on rescue of astronauts, return of astronauts and returning of objects launched into outer space. This was appended to Resolution 2395 (XXII) of 19 December.

Finally, the agreement on international responsibility for damages caused by space vehicles was recently appended to Resolution 2777 (XXVI) of 29 November 1971.

In this way, the partial accomplishment of the program specified by Resolution 1802 on the matter of treaties was done rather slowly. It is true that, insofar as the most important text is concerned, the principles governing exploration and use of outer space (treaty of 1967) had been preceded by Resolution 1962 (XVIII) of 13 December 1963 whose content is much the same. Nevertheless, it is obvious that the legal value of a resolution, even when accepted unanimously, is clearly less than that of a ratified and currently valid treaty.

The work already accomplished by the U.N. in the matter of space law is considerable and its merits should be emphasized. However, international cooperation is not only expressed within the scope of the U.N. It makes its appearance in various treaties which are bilateral or multilateral in nature.

In the discussion of bilateral treaties, we need only mention a few examples. The American-Soviet Treaty on Cooperation in the Field of Exploration and Peaceful Uses of Outer Space signed in Moscow on 24 May 1972 can be

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[2] The creation of the Working Group for Space Law in 1963 specifically corresponds to the period of development of the program dealing with legal problems.

mentioned. It is based on the principle of a very vigorous technical cooperation concerning the docking of the Soyuz and Apollo space vehicles, carrying out in this way the scientifically oriented treaty signed on 6 April 1972 between NASA and the Academy of Sciences of the USSR. The latter treaty is subsequent to other ones previously concluded between the same scientific institutions (for example, the one signed in Geneva, 8 July 1962).

Consideration can likewise be given to treaties concluded by France such as the Franco-Soviet Treaty of 30 June 1966 as well as the Franco-German Treaty of 6 June 1967.

There are also quite important treaties falling within the scope of multilateral treaties. We quite naturally can refer to the agreements for European cooperation signed on 29 March 1962 in London for the creation of the organization called CERS-ESRO as well as that of the CECLES-ELDO. We can also mention multilateral treaties within the field of telecommunications by satellites.

This first system was replaced on the Worldwide scale by the Washington treaties of 20 August 1964 establishing a provisional mode of operation applicable to a Worldwide commercial system of communications by satellites (cf. page 9) and by the treaties of 1971. In a more restricted geographic area, the treaty concluded between States of the Soviet Bloc, known by the term Intersputnik and signed in 1971 at Moscow (cf. page 16) should be mentioned.

Furthermore, it will be noted, and the explanation therefore is obvious, that, when the treaties are set aside which are concluded between two States whose technicians are capable of sending vehicles into space or spacecraft to the Moon for purposes of exploration, the international cooperation concerns the satellites themselves and, more particularly, the telecommunications satellites.

The following studies are devoted to the legal problems presented by these applications satellites. It is advisable to specify the special character of these problems and their effect on the very concept of those principles defining space law.

Space law was initially conceived as a law relating to outer space, i.e., as if law is applicable to a special domain.

This domain was not defined precisely to the extent that no strict delimitation has been made between outer space and the air domain. Still, in /3 a "domain system", the delimitation itself does not necessarily have a fundamental importance. In maritime law, for example, the legal system of the territorial waters is considered as different from that of the high seas without a specification required beforehand of the boundaries of the territorial waters.

Accepting the validity of this first comment, operations in space have been characterized, especially with regard to the treaty of 1967, by a number of principles. When we set aside the provisions of article 4 of the treaty of 1967, according to which the signatory States pledge themselves not to place in a terrestrial orbit any object carrying nuclear weapons or any other type of weapons of mass destruction, not to install such weapons on celestial bodies nor in any other manner in outer space (i.e., if the principle of peaceful use in its true sense is set aside), it is possible to isolate from analysis of articles 1, 2, 3 of the treaty a set of 4 principles:

1) the exploration and use of outer space, including the Moon and other celestial bodies, should be accomplished for the good and in the interests of all countries notwithstanding their stage of economic or scientific development. They are the prerogative of all mankind (article 1);

2) outer space, including herein the Moon and other celestial bodies, can be explored and freely used by all States without discrimination, under conditions of equality and in conformity with international law (article 1, paragraph 2);

3) outer space, including herein the Moon and other celestial bodies, are not subject to national appropriation... (article 2);

4) the activities of the States signatory to the treaty relating to the exploration and use of outer space, including herein the Moon and other celestial bodies should be carried out in conformity with international law and the United Nations' Charter.

These four principles are clearly applicable to the space domain insofar as concerns its exploration and that of the Moon and other celestial bodies.

The system includes one new important feature which is that concerning not being subject to national appropriation which is reflected by a system of absence of sovereignty. Thus, space law, considered as a law relating to an international domain, may be analyzed as a system of absence of national sovereignty and appropriation.

The fundamental idea is new and it could even be said that it is revolutionary. However, the problem is, in reality, much more complex than that of an international domain which is merely to be explored. The problem of use is also involved.

In this regard, it should be noted that the use is free on condition that various principles are respected such as, first of all, that of non-discrimination and equality and then the one concerning conformity to international law, including herein the United Nations' Charter. It is advisable to recall that among the principles defined by the Charter there is the one for sovereign equality invoked by the first Resolution of the United Nations in 1958 (Resolution 1348).

Consequently, there appears to be a fundamental distinction concerning space. How is exploration concerned in "domain" law whose essential principle is that of non-sovereignty and non-appropriation? Space law, understood as a domain law, is, in this regard, entirely different from the Earth (if this can be so expressed) law. It is a law which relinquishes the conventional concepts concerning sovereignty and property. Does use of space extend beyond exploration itself? In this case, everything changes. Indeed, we have returned to the concepts of "Earth law" which are the principles of non-discrimination, sovereign equality and conformity with conventional international law including herewith the United Nations' Charter.

This is how we can see appear a fundamental distinction and a divorce /4 between two formulations of space law. It is the space law of non-sovereignty and non-appropriation which is applied for the exploration of space itself, the Moon and other celestial bodies. It is then a space law not separated from

Earth requirements which should be applicable for the use of space, for example, by applications satellites.

This is the essence of the legal problems presented by applications satellites. They do not have the goal of exploration of space or increasing knowledge concerning it. They are used to carry out strictly Earth aims, in order to increase human knowledge and, sometimes, as a consequence, human capability in the terrestrial domain[3].

In this regard, not only the concept of equality of States is in the foreground but also that of sovereignty. We are thus found involved in a system in which the concepts are in part fundamentally different from revolutionary concepts (non-sovereignty and non-appropriation) which appear to control space law considered as a law of an international domain.

The conventional concepts of sovereignty and sovereign equality are going to dominate the use of applications satellites, more particularly those used for purposes of telecommunications or remote sensing.

The satellite which is in space has been launched freely with only a notification required as provided for by Resolution 1721 in its article B. However, its use is not free. It is regulated and does obey requirements. The revolutionary law of space (the independent law to talk more legally) is dwindling in significance. It is giving way to a law which is much more conventional owing to its Earth connotations and is doing this because space activity concerned here is not oriented toward space but toward Earth.

It is no longer a question for human intelligence to conquer domains of knowledge or make a harvest of data beyond the Earth but using an ultraterrestrial domain as a more convenient carrier for instruments used for direct Earth goals. This is Earth's revenge and its domination of an interstate system is now clear. This is confirmed in various ways.

Within the scope of the International Telecommunications Union (ITU), the World Administrative Conference of Space Telecommunications of Geneva did, in

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[3] M. A. W. Stoebner (International Affairs Division of the CNES) gave the Working Group on Space Law on 17 January 1973 a brilliant report accompanied by considerable documentation on the contemporary problems of applications satellites. A number of remarks made during this report were used in the present introduction.

1971, adopt a Resolution (No. Spa 2-1) according to which all countries have the same right to use radio frequencies allocated to the various space radio communications services as well as, for these services, the orbit of geostationary satellites. It was specified that the spectrum of these frequencies and the orbit of the geostationary satellites represent limited natural resources and that it is advisable to use them in the most efficient and economical way possible.

Noting the different degrees of scientific development of the States, the Conference decided that the recording, at the ITU, of frequency allocations for the space radio communications services and use of these allocations should not award a permanent priority to such and such a country or group of countries and form an obstacle to the creation of space systems by other countries.

These provisions are in agreement with the terms of the Treaty of Space but they end up by subordinating the concept of freedom of use to concepts of equality and non-discrimination which, ultimately, deeply modifies the rules.

As far as telecommunications satellites are concerned, provisions are likewise encountered which emphasize the sovereignty of States. In its declaration of the guiding principles for use of radio broadcasting by satellites for the free circulation of information, furthering of education and development of cultural exchanges, the General Meeting of UNESCO on 15 November 1972 affirmed in its article 2: "The radio broadcasting by satellite should respect the sovereignty and equality of all States."

The principle of sovereignty of States is reinforced by article 9 which, insofar as emissions by satellites intended to be received directly by the public of a country other than the country of origin are concerned, requires conclusion of preliminary treaties on the part of the country whose territory would be "covered" in this way.

The concept of sovereignty, conventional concept of "Earth" law, limits in this way the new principle of the free use of space[4]. We find a similar concept in the discussions presently being held on the subject of use of remote sensing satellites. The activity of these satellites is essentially "terrestrial" in nature since they allow cataloging the resources of the various countries. Although the launch can appear to be free, in reverse, the use of data collected appears to require the prior consent of States whose territory has been subject to sensing.

There is no positive law textbook in this field and the first experience only dates back to July 1972 when ERTS-1 was placed in orbit. However, it is clear that the technical advancement of some States should not end up in their being granted the capability for conducting a census of the Earth resources of other States, disregarding all the principles developed over the past few years in the matter of "sovereignty over natural resources."

Thus, space law, when it concerns satellites, is much less independent with respect to conventional concepts than space law relating to spacecraft. In reality, the legal solutions follow here, as always human activities in their true sense.

What has been called the conquest of space by men of the second half of the twentieth century has two very different appearances.

Some activities are placed under the sign of human exploit, there even being a temptation to apply the adjective sporting, as for example the whole of the Apollo program, or under the sign of spectacular automation like the Soviet robots. There is a revolutionary law of space for these activities.

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[4] It will be seen that, in Resolution 2916 adopted by the U.N. General Assembly on 9 November 1972, on the occasion of its 27th session and concerning the preparation of an international agreement on the principles governing use by States of artificial satellites of the Earth for purposes of direct television, the principles which are called upon are those of "Earth" relationships as well as peaceful coexistence, namely mutual respect for sovereignty, non-involvement in domestic affairs, equality, cooperation and mutual advantages. The principles of non-sovereignty and non-appropriation, i.e., the "space" principles were not provided for.

Nevertheless, confronting the exploits accomplished by a few rare men and accessible to very few States, there are, on the contrary, different daily uses which are Earth-oriented and exploit space for reasons of technical progress. This is basically the whole program of applications satellites. Since the activities are carried out for the States themselves, the customary fundamental ideas of interstate law and international law (including the principles of the United Nations' Charter) are applicable. This is everyday law. It is less spectacular but it is likewise respectable since it has as its goal the wellbeing and progress of mankind.

It was advisable to emphasize this note of conventionality of this part of space law which concerns, only partly today but more totally tomorrow, the everyday life.

The author of this introduction wishes to particularly express his appreciation to the editing staff of La Recherche Spatiale for having accepted the abstracts of some studies involving some legal and administrative aspects of space activity such as it now appears in the most promising sectors. This is also done not only in the name of the author but also in that of the Working Group on Space Law set up in 1963, owing to the efforts of Professor Suzanne Bastid, by the Section for Legal and Political Sciences of the CNRS who then asked her to undertake its management.

The contributions appearing in the present issue of LaRecherche Spatiale and those which will appear in the following one come from members of the Group. The latter includes, in addition to University faculty and members of the CNRS, specialists of the CNES, international officials, representatives of the Ministry of Foreign Affairs and persons affected by problems within the scope of competence of the Group.

This Group meets regularly to study the legal problems appearing to be essential and which are discussed within the Committee for Peaceful Use of Outer Space of the United Nations. It published, in 1968, a first work "The Telecommunications by Satellites" (editions Cujas) and, in 1970, a second collective work "The Use of Direct Broadcasting Satellites" (Presses Universitaires de France, collection of works and investigations of the Faculty of

Law and Economic Sciencies, Paris). Furthermore, the Group publishes a semiannual bulletin of analysis and information, Space Law (Le Droit de l'Espace) which is now published by the Documentation Francoise (29-31 Quai Voltaire, 75340 Paris, CEDEX 07).

FIGURE CAPTIONS

Figure 1

The conquest of space which began on 4 October 1957 has led to the development of a space law based on the concept of exploration. The launching of applications satellites for meteorology (Tiros-1 in 1960), telecommunications (Telstar-1 in 1962) or remote sensing of Earth resources (ERTS-1 in 1972) has led to addition of the use concept. Shown above is the Languedoc littoral photographed by ERTS on 9 October 1972 using near infrared. There may be seen, among other points of interest, the city and port of Marseille, pond of Berre, complex of Fos and the Camargue (NASA photo).

Figure 2

American and Soviet cooperation in space matters has continuously improved over the past few years. One great milestone in its history was highlighted when President R. Nixon and A. Kosygin in Moscow signed on 24 May 1972 (AFP photo), a treaty which provided for the docking in space of two manned Apollo and Soyuz spacecraft as well as other matters. Subsequently, other goals of cooperation concerning planetary exploration (essentially the topography of Mars) and Earth sciences (hydrology, geology, glaciology, ...) will be adopted.

Figure 3

Within the scope of Franco- Soviet space cooperation, a conference having as its subject "Exploration and Peaceful Uses of Outer Space" took place in Tblisi, capital of Georgia (USSR), from 19 to 26 September 1972. From left to right can be seen the academician B. N. Petrov, leading the Soviet delegation, academician E. K. Khardze, Vice-Chairman of the Academy of Sciences of Georgia, M.J.F. Denisse, Chairman of the CNES, leading the French delegation and M. A. Lebeau, Deputy Director General responsible for Programs and Industrial Policy at the CNES (Photo A. Lebeau).

Figure 4

The project for the Franco-German geostationary telecommunications satellite Symphonie began with the signing on 6 June 1967 in Paris of an agreement between the government of the Republic of France and that of the German Federal Republic. Its development was entrusted to the Franco-German Industrial Consortium for the Symphonie Satellite (Consortium Industrial Franco-Allemand pour le satellite Symphonie-CIFAS). Above, the van used for testing for compatibility between the satellite and telemetry and control stations (photo CNES).

Figure 5

After signing on 18 February 1963 a memorandum of agreement relating to the FR-1 satellite project, CNES and NASA signed a new memorandum three years later which was to be made specific on 16 August 1971 on the occasion of the launch of the Eole satellite whose nose cone can be seen here (photo CNES). Within the scope of the same program, the CNES and the CNIE (Argentina) ratified in March 1969 a number of space cooperation treaties concerning the release of memeorological balloons from three sites set up in Mendoza, Neuguen and Lago-Fagnano.